CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Black Eagle Bank Stabilization
Proposed Implementation Date:	Summer/Fall 2021
Proponent:	City of Great Falls
Location:	Township 20 North, Range 3 East, Sec. 1 (Missouri River Bed)
County:	Cascade County

I. TYPE AND PURPOSE OF ACTION

The City of Great Falls has applied to alter/stabilize the riverbank of the Missouri river adjacent to the 9th Street North Bridge. The proponent wishes to place gabion baskets, erosion mats and rip rap along the stream bank to reduce erosion and prevent future issues with the city's sanitation system. The State of Montana owns the riverbed of navigable waterways, low watermark to low watermark.

The gabion baskets, erosion mat and rip rap would be just within the low watermark and extend through the high watermark, along the Missouri River. The existing riverbank is exposed soil with steep banks and sparse vegetation.The proposed project site would include 813 feet along the Missouri River, with rip rap extending slightly into the river from the low watermark and expanding 30-60 feet away from the water body. This site is located immediately west of the 9th St N Bridge in Great Falls, MT. Please see the attached maps, exhibits and photographs.

The contractor would remove approximately 4,280 cubic yards of existing soil along the stream bank and replaceexcavated soil with gabion baskets, class II rip rap, erosion mats, 8oz. non-woven geotextile, and willow cuttings. All work would be done with an excavator, dump trucks, coffer dam, bulldozer and other construction equipment. Private landowners and city owned property neighbor the project site.

The proponent has applied for the appropriate permits required in the Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies. The City of Great Falls would begin excavation and placing the rock after obtaining the necessary permits. The proponent wishes to begin construction 06/01/2022 if the project is approved with project completion by 08/31/2022.

Please see attached photos and construction drawings prepared for the project by WWC Engineering forlocations and details of the project.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

The DNRC did not perform any formal, public scoping for this project. Regulatory agencies, landowners, lessees were informed of the project via the Joint Application for Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies and/or the DNRC Right of Way Easement process. All required permits from the Joint Application would be sent to DNRC upon approval.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

The following permits are required under the Joint Application for Proposed Work in Montana's Streams, Wetlands, Floodplains, and Other Water Bodies.

- Cascade Conservation District: 310 Permit
- Local Floodplain Administrator: Floodplain Permit
- USACE: Section 404 Permit, Section 10 Permit
- DFWP: SPA 124 Permit

3. ALTERNATIVES CONSIDERED:

Alternative A (No Action): Deny the proponent's project and the existing stream bank would not be altered.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The area of the proposed project is commercial and recreational, within Great Falls, MT. This section of the Missouri River is classified as navigable.

Once the streambed material is excavated, the contractor would decrease the slope of the bank and replace removed material with gabion baskets, rip rap, and erosion mats. The location of excavation would occur just within the water body to approximately 60 feet away from the water body. Rip rap materials would be placed ontop of the riverbed and stream bank with an excavator, bulldozer, and dump trucks. The construction equipment would be used on city owned surface. When the excavation and rip rap is in place, work and excavated areas would be re-vegetated and fully reclaimed with native grass and willows.

No State of Montana Trust Land surface would be impacted. This excavation method would replace soil on the stream bank with large rocks to minimize erosion and soil loss.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to geology and soil quality, stability and moisture.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Minimal impacts to geology and soil quality, stability and moisture are anticipated.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed project would occur along the Missouri River stream bank. As noted in Item 4 *Geology and Soil Quality, Stability and Moisture*, the use of an excavator would reduce the amount of equipment in the water way. Brief excavation within the water body would have a minimal impact on water quality, quantity and distribution of theMissouri River as long as the contractor uses clean equipment and doesn't contaminate the waterway. Gabion baskets and other rip rap materials must also be clean of foreign materials before entering the water.
Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to water quality, quantity or distribution.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Minimal impacts to water quality, quantity or distribution are anticipated.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Stream bank alteration would occur between 06/01/22 and 08/31/22. The short construction time between excavation to rip rap placement would have minimal cumulative effects to air quality in the immediate vicinity of the project.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to air quality.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Due to the temporary duration – significant, long-term, adverse impacts to air quality are not anticipated. Dust mitigation may be required.

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7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The State of Montana claims ownership of navigable waterways, low watermark to low watermark, including those of theMissouri River. Vegetation of these areas is limited to aquatic species. Small amounts of stream bed would be removed along with vegetation. Once sediment is removed, the proponent would fill these areas with rock hindering vegetation cover, quality, and quantity within the project area.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not bealtered. No direct impacts to vegetation cover, quantity, and quality.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Due to the small project area within the waterbody, minimal impact is anticipated to vegetation on state owned riverbeds.

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8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

State owned riverbeds are not habitat to terrestrial wildlife; therefore, this document only addresses aquatic and avian species and habitat. Any aquatic or avian wildlife would lose native or introduced vegetation within this project area. Minimal effects would be anticipated due to the very small amount of vegetation found in the affected streambed.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to terrestrial, avian and aquatic life and habitats.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Due to the small project area within the waterbody, minimal impact is anticipated for aquatic and avian life and habitats of state-owned riverbeds.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A search of the Montana Natural Heritage Program database indicated that there were eight species of concern with point observations in Township 20 North, Range 3 East Section 1: Great Blue Heron, Spiny Soft-shelled Turtle, Pale-yellow Jewel Weed, Many-headed Sedge, Chaffweed, and Foxtail Muhly.

Cumulative effects to these species are anticipated to be one-time, short duration during the construction phase of this proposal.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to unique, endangered, fragile or limited environmental resources.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Minimal impacts are anticipated to unique, endangered, fragile or limited environmental resources due to existing, adjoining riverbank with altered stream banks and small project area.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search revealed that no cultural or paleontological resources have been identified on the Missouri Riverbed the APE (the state owned portion of the APE). No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The existing stream bank is eroding and falling into the water body. If approved, the project area would transition from lower floodplains to reinforced stream banks below the 9th St N Bridge.

Rip rap would be visible by neighboring properties, recreational users on the city walk path, or anyone on the Missouri River. Short term construction time would have one-time, minimal impacts to aesthetics of the area.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank wouldnot be altered. No direct impacts to aesthetics.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Short term impacts to aesthetics of the area.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

The area does not contain limited resources. Nearby activities consist mostly of commercial and recreational activities.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

Other permits that are required by other local, state or federal agencies or departments for the proposed project are listed above in Section 2 of this document. This proposal would be a permanent stream bank alteration and there are no future impacts anticipated.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The proposed project could create human health and/or safety risks associated with the excavation process However, excavation and staging sites are not located on State of Montana Trust Lands. Construction would occur on/off of the city walking path and equipment combined with heavy rock structures are inherently dangerous. Contractors would close the area to recreation and address safety hazards during construction. This existing project area is very steep from the walking path to the water with rocks at the bottom. The large rocks off the walking path, may pose a safety risk, but the slope wouldn't be as extreme if approved.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to human health and safety.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to industrial, commercial and agriculture activities and production.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. No direct impacts to industrial, commercial and agriculture activities and production anticipated.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to quantity and distribution of employment.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. No lasting impacts to quantity and distribution of employment.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No direct impacts to local and state tax base and revenues.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. No lasting impacts to local and state tax base and revenues.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. No anticipated change to traffic patterns.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

Implementation of the No Action Alternative or either Action Alternatives is not expected to conflict with any locally adopted plans.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

Alternative A (No Action): No work would occur. Deny the proponent's project and the existing stream bank would not be altered. No impact to access to and quality of recreational and wilderness activities.

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. Minimal impacts to access to and quality of recreational and wilderness activities over state owned riverbeds are anticipated for boat usage on the river, however walk in access from the city walk path would be improved.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

Implementation of the No Action Alternative or either Action Alternative is not expected to have significant adverse impacts to density and distribution of population and housing.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

There are no native, unique or traditional lifestyles or communities in the vicinity that would be impacted by implementation of the No Action Alternative or either Action Alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

Implementation of the No Action Alternative or either Action Alternative is not expected to have a significant adverse impact on cultural uniqueness or diversity.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The State of Montana would receive a one-time fee for the land use license. The Public Lands Trust is the beneficiary of this payment since it involves a navigable river.

EA Checklist Prepared By:	**Name:**	Dylan Craft	**Date:**	11/2/2021
	Title:	Land Use Specialist		

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B (Proposed Action): Approval of the request to allow the proponent to excavate existing soil and replace it with rip rap, gabion baskets, erosion mats, and other erosion preventative materials. The proponent would be issued a Land Use License to authorize the activity which would occur in the low watermark of the Missouri River.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

This project would include installing streambank erosion control measures. The potential for significant adverse impacts to Public Trust Lands (the navigable riverbed) are reduced by the short duration of construction. No impacts resulting from this project are regarded as severe, enduring, geographically widespread, or frequent. Further, the quantity and quality of various resources, including any that may be considered unique or fragile, would not be adversely affected to a significant degree. There is no precedent for future actions that would cause significant impacts, and there is no conflict with local, State, or Federal laws, requirements, or formal plans. In summary, I find the identified, adverse impacts would be avoided, controlled, ormitigated by the design of the project to the extent the impacts are not significant.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

[ ] EIS	[ ] More Detailed EA	[X] No Further Analysis

EA Checklist Approved By:	**Name:**	Heidi Crum
	Title:	Helena Unit Manager

Signature: Heidi Crum **Date**: November 18, 2021

Photo location and project area:

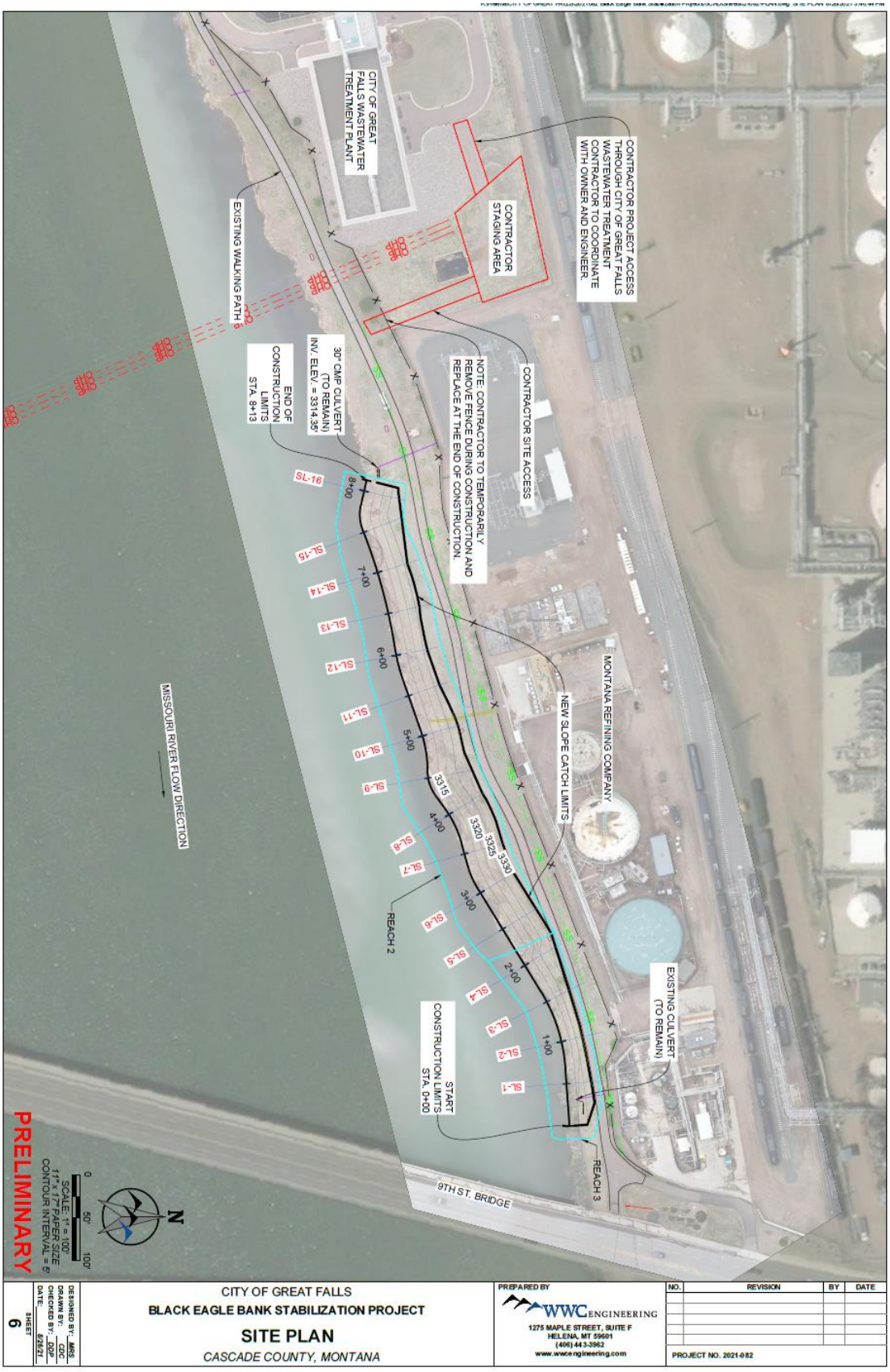
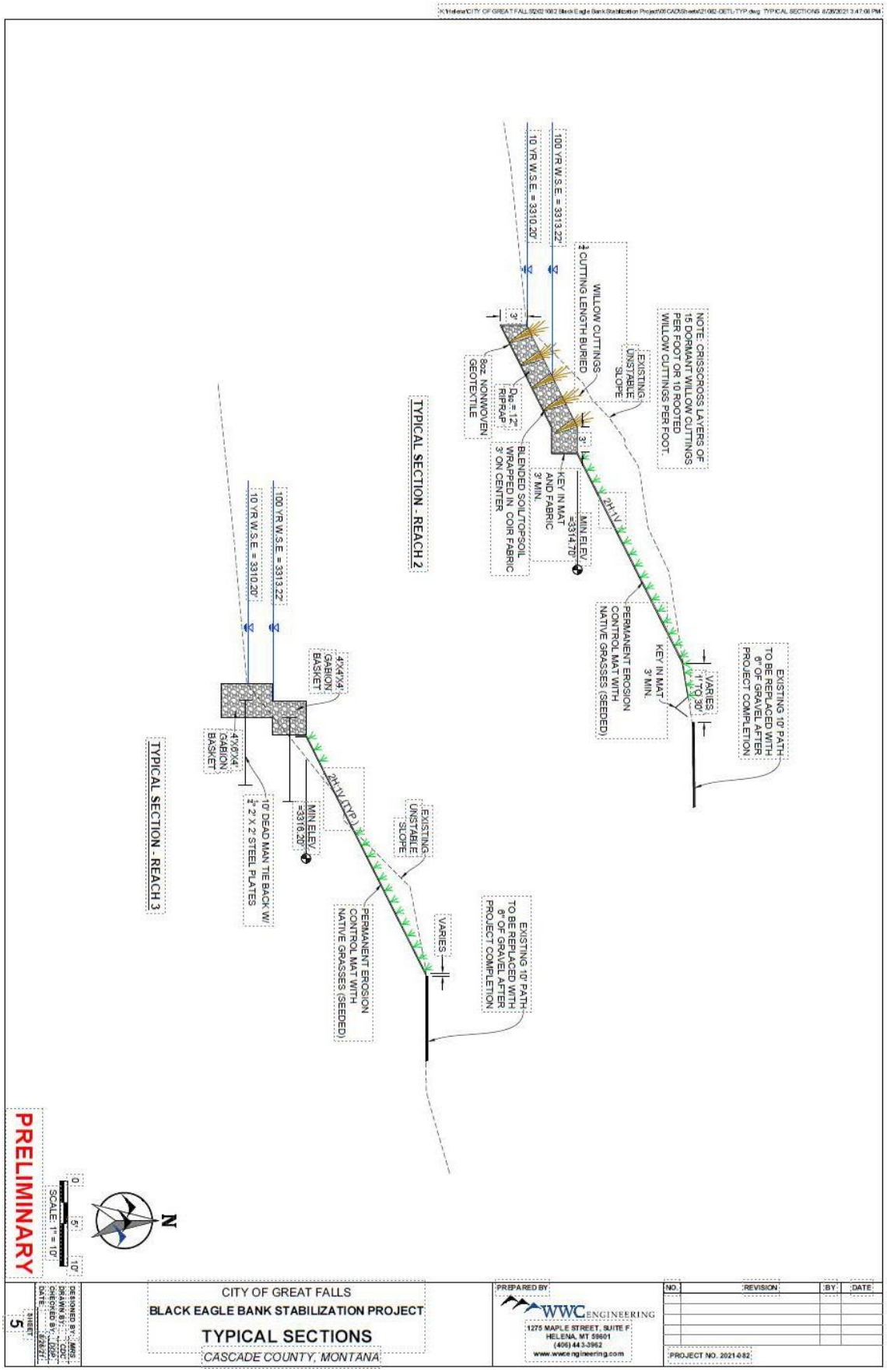


Photo Taken on 10/29/2021
Immediately West of 9th St N Bridge facing West


TYPICAL SECTION - REACH 2
100 YR W.S.E. = 3313.22'
10 YR W.S.E. = 3310.20'
3'
WILLOW CUTTINGS
4' CUTTING LENGTH BURIED
NOTE: CRISSCROSS LAYERS OF 15 DORMANT WILLOW CUTTINGS PER FOOT OR 10 ROOTED WILLOW CUTTINGS PER FOOT.
EXISTING UNSTABLE SLOPE
8oz NONWOVEN GEOTEXTILE
D_{50} = 12" RIPRAP
BLENDED SOIL/TOPSOIL WRAPPED IN COIR FABRIC 3' ON CENTER
KEY IN MAT AND FABRIC 3' MIN.
MIN ELEV. 3314.70'
2H:1V
PERMANENT EROSION CONTROL MAT WITH NATIVE GRASSES (SEEDED)
KEY IN MAT 3' MIN.
VARIES 1' TO 30'
EXISTING 10' PATH TO BE REPLACED WITH 6" OF GRAVEL AFTER PROJECT COMPLETION
TYPICAL SECTION - REACH 3
100 YR W.S.E. = 3313.22'
10 YR W.S.E. = 3310.20'
4'X4'X4' GABION BASKET
4'X8'X4' GABION BASKET
10' DEAD MAN TIE BACK W/ ½" 2' X 2' STEEL PLATES
MIN ELEV. 3316.20'
2H:1V (TYP.)
EXISTING UNSTABLE SLOPE
PERMANENT EROSION CONTROL MAT WITH NATIVE GRASSES (SEEDED)
VARIES
EXISTING 10' PATH TO BE REPLACED WITH 6" OF GRAVEL AFTER PROJECT COMPLETION
N
0
5'
10'
SCALE: 1" = 10'
PRELIMINARY
CITY OF GREAT FALLS
BLACK EAGLE BANK STABILIZATION PROJECT
TYPICAL SECTIONS
CASCADE COUNTY, MONTANA
PREPARED BY
WWC ENGINEERING
1275 MAPLE STREET, SUITE F
HELENA, MT 59601
(406) 443-3962
www.wwcengineering.com
NO.
REVISION
BY
DATE
PROJECT NO. 2021-082
DESIGNED BY: MRS
DRAWN BY: CDC
CHECKED BY: DDP
DATE: 6/28/2021
SHEET
5